

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2005/001094

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H02K7/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H02K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|------------------------------------------------------------------------------------|-------------------------------------------------|
| X | DE 43 38 103 A1 (KLEMM, WOLF, 82049 PULLACH, DE) 11 May 1995 (1995-05-11) | 1-3, 8, 11 |
| Y | column 2, line 53 - column 3, line 26; figures 1-3 | 1-6, 8-10, 13, 14, 17, 18, 20-25, 27-29, 37, 38 |
| Y | GB 2 302 456 A (HUI LUNG * CHANG) 15 January 1997 (1997-01-15) | 1-3, 8, 10, 13, 14, 17, 18, 20-22, 29, 37, 38 |
| A | the whole document | 8, 27 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

30 June 2005

Date of mailing of the international search report

03/08/2005

Name and mailing address of the ISA

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PC 1, 2005/001094

| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | T. YAN, B.E. JONES, R.T. REDOWSKI, M.J.TUDOR, S.P. BEEBY, N.M.WHITE: "Thick-film PZT-metallic triple beam resonator" ELECTRONICS LETTERS, vol. 39, no. 13, 26 January 2003 (2003-01-26), pages 982-983, XP002332837 | 4-6, 8, 9, 23-25, 27, 28 |
| A | page 982, column 2, paragraph 2 - page 983, paragraph 5; figure 1 | 17, 20 |
| X | E.P.JAMES, M.J.TUDOR, S.P.BEEBY, N.R.HARRIS, P .GLYNNE-JONES, J.N.ROSS, N.M.WHITE: "an investigation of self-powered systems for condition monitoring applications" SENSORS AND ACTUATORS, vol. A110, 1 February 2004 (2004-02-01), pages 171-176, XP002332838 | 1, 4, 7, 8, 10, 32-40 |
| A | page 172, column 1, paragraph 2 - page 173, column 1, paragraph 1 page 174, column 2, paragraph 3 - page 175, column 1, paragraph 1 | 6, 17, 20, 23, 29 |
| A | M.MIZUNO, D.G.CHETWYND: "Investigation of a resonance microgenerator" JOURNAL OF MICROMECHANICS AND MICROENGINEERING, no. 13, 3 January 2003 (2003-01-03), pages 209-216, XP002332839 | 1, 17 |
| P, A | page 209, column 2, paragraph 2 - page 210, column 2, paragraph 3; figures 1-3 ----- P.D.MITCHESON, T.C.GREEN, E.M.YATMAN, A.S.HOL MES: "Architectures for Vibration-Driven micropower Generators" JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, vol. 13, no. 3, June 2004 (2004-06), pages 429-440, XP002332840 | 1-40 |
| | page 429, column 1, paragraph 2 - page 433, column 2, paragraph 1 page 438, column 1, paragraph 2 - page 439, column 2, paragraph 6; figures 2-5, 7-9, 27 ----- | |

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ional application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 41
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest:

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 41

Present claim 41 relates to an extremely large number of possible apparatus by referring back to the drawings. In fact, the claim contains so many possible permutations and provisos that a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of this claim impossible.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16

generator comprising two magnets on a first mount and a coil on a second mount; coil and magnets are vibratable about their respective central position

2. claims: 17-31

generator comprising two coils being located between a respective pair of magnets; each coil has a resonant frequency being different from the other

3. claims: 32-40

use of a generator for signal transfer with a remote central unit

4. claim: 41

all features shown in the drawings and not defined in claims 1-40

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| Inter | Application No |
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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|-------------------------------------------|---------------------|----------------------------|---------------------|
| DE 4338103 | A1 | 11-05-1995 | NONE |
| GB 2302456 | A | 15-01-1997 | FR 2735817 A3 |
| | | | 27-12-1996 |